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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/664,873

09/22/2003

Hideo Tamamura

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

HODGE, ROBERT W

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

05/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/664,873	Applicant(s) TAMAMURA ET AL.	
	Examiner ROBERT HODGE	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/17/08 has been entered.

Response to Arguments

Applicant's arguments filed 3/17/08 have been fully considered but they are not persuasive. The main premise of applicants' arguments is that Bullock does not teach a "detecting switch for detecting the mounting of the fuel cell" and Dunstan does not make up for the supposed deficiency of Bullock.

In response to applicant's argument that Bullock's device is not capable of detecting the mounting of a fuel cell under certain circumstances, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Therefore Bullock only needs to be capable of detecting the fuel cell under one circumstance in order to read on the claim. Therefore as has been stated in previous office actions the information storage device which is

located on the fuel cartridge of Bullock, when connected through the electrical links to the fuel cell will then receive power from the fuel cell and then send data to the controller and a user can then observe the data from the information storage device located on the fuel cartridge and not only physically observe the presence of the fuel cartridge in contact with the fuel cell, but can then receive fuel storage information from the fuel cartridge to determine when the cartridge must be replaced. Therefore because the presence of the fuel cartridge in contact with the fuel cell is user observable at least in two circumstances; physically locating the position of the cartridge and electronically observing the status of the fuel cartridge from the user interface, it is submitted that Bullock teaches a "detector switch" that is capable of detecting the mounting of a fuel cell. Regarding the definition of switch with regards to Bullock, physically an electrical switch either makes or breaks an electrical communication within a circuit. Bullock teaches electrical links 202a and 202b are either connected or disconnected from each other thereby forming a "switch".

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bullock et al. (US 6,713,201 B2) in view of Dunstan (US 2003/0096144 A1).

Bullock et al. teach a fuel cell system comprising a fuel cell stack (128) and a fuel supply apparatus (132), wherein the access to the fuel supply unit and the water-

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discharging unit is disposed at the same face of the fuel cell and the fuel supply apparatus comprising a fuel supply unit (142) and a water-suctioning unit (144) (vacuum). Bullock et al. further teach the header information stored by the information storage device will be accessed by the system controller after the PDA has been initiated (e.g., powered up or reset) with a fuel cartridge present within the fuel cell housing socket. The data structure parameter will be accessed prior to the keying information. In the instance where the keying information stored on the information storage device indicates that the fuel cartridge corresponds to the requirements of the host device, operating will be permitted. If, on the other hand, the keying information indicates that the fuel cartridge is wholly unacceptable, fuel transfer/cell operation will be prevented and the user will receive an audible and/or visibly message concerning the situation. Also, the fuel cell stack (128) is connected to various electrical loads such as the display (114) and system controller (126). The absence of the fuel cell stack from the device will necessarily be detected by the display and controller due to lack of power. See Figure 3, Column 3, Line 45 to Column 4, Lines 34, Column 6, Line 57 to Column 7, Line 12.

Bullock et al. do not teach or suggest the water-suctioning unit includes an evaporator that provides heat to the suctioned water.

Dunstan teaches a system to remove heat and water from a fuel cell-powered portable electronic device. The system comprises a water- absorbing material and a heat-generating device (16) that facilitates the evaporation of the water byproduct. See Paragraphs 19,25, Figures 1a-1c.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a heat-generating device in the fuel cell system of Bullock et al., as taught by Dunstan in order to facilitate the evaporation of byproduct water collected in the system.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 2004/0131903 hereinafter Shioya.

Shioya teaches a fuel supply system for fuel cells wherein the system comprises a fuel cell 50 that generates power from fuel and oxygen resulting in water as a byproduct comprising a fuel supply unit 14 and a water discharging unit 15 provided at a same face of said fuel cell, a fuel supply apparatus comprising a mounting unit 21, a fuel supply unit 27 and a water suctioning unit 28 and a detecting switch 24 (i.e. check valve) (figures 1, 3 and 9 and paragraphs [0042]-[0052] and [0065]-[0073]). It should be noted that the check valve 24 which supplies fuel to the fuel cell is construed as a switch because it will only supply fuel to the fuel cell when it is connected to the fuel supply unit 14 of the fuel cell and if it is not connected the check valve will close and stop the flow of fuel leaving the cartridge, see paragraph [0052]. Regarding the water suctioning unit 28 it is noted that the fuel cartridge is a sealed cartridge and as the fuel in the cartridge is evacuated a vacuum will be formed around 28 thus providing a suctioning action for the byproduct water from the fuel cell.

Shioya does not teach or suggest the water-suctioning unit includes an evaporator that provides heat to the suctioned water.

Dunstan as discussed above is incorporated herein.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a heat-generating device in the fuel cell system of Shioya, as taught by Dunstan in order to facilitate the evaporation of byproduct water collected in the system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HODGE whose telephone number is (571)272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert Hodge/
Examiner, Art Unit 1795

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